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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,477	02/10/2004	Anthony de la Llera	LAM2P306C	4062
7590 Feb R. Cabrasawan Martine & Penilla, LLP 710 Lakeway Drive, Suite 170 Sunnyvale, CA 94085			EXAMINER OJINI, EZIAMARA ANTHONY	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/776,477

Applicant(s)

LLERA ET AL.

Examiner

Anthony Ojini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's cancellation of claims 2,11 filed 4/27/07 is acknowledged.

Claim 6 depends on canceled claim, and for the purpose of this office action, claim 6 will be treated as if it depend on claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3-10,12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker et al. (6,358,114 B1).

With respect to claims 1,3-10,12-20, Walker et al. disclose applicant's invention. The fixed hollow shaft 4 is connected to the loading rod 16, which is constrained to move axially, relative to a rigid housing 25 connected to the plate 12, by flexural supports 17. The axial force applied by the loading rod 16 to shaft 4, and hence the tool, is set by the solenoid 18 through the load cell 19, which measures this force. The actual force applied to the tool will differ from this because of the spring constants of the flexural supports 17 and the bellows coupling 5, both acting in the axial direction. The position transducer 20, which in this example is an LVDT (linear variable differential transformer), measures the axial movement of the loading rod and provides a signal from which the axial spring force can be determined, for correcting the load-cell reading.

The lateral force exerted on the tool by friction with the work piece is measured by strain gauges 21 mounted on the loading rod 16 which is locally thinned so that it bends in response to this force.

The flexible tube 22 is connected to the central channel in the loading rod 16 and feeds the air for pressurizing the flexible diaphragm 1. The pressure is controlled as described below, and the air under pressure is supplied from a standard pump (not shown). It will however be appreciated that other fluids including liquids could be used.

In this second exemplification, variation in the contact area for polishing is performed by calculated compression of a soft tool under computer control. One effect of the method exemplified is that the polishing pressure is maintained approximately constant for a range of contact areas and total forces.

In FIG. 2, the soft tool is shown as a rubber diaphragm inflatable by air. It is 50 mm in diameter and 2 mm thick for a workpiece of 250 mm diameter; or larger or smaller in proportion to the workpiece size, or for polishing larger or smaller areas. The diaphragm is inflated with computer-controlled pressure, or temporarily or permanently sealed, so as to bulge. The air pressure is a close approximation to the required polishing pressure. The bulge of the tool is covered on the work side with a polishing material. The polishing material can consist of, for example, cloth, felt, soft polyurethane foam or a mosaic of pitch segments on cloth and can be glued onto the diaphragm. The material can polish in the normal way with the addition of a fine abrasive. The tool is moved towards the workpiece by the machine under computer control, to positions

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ranging from first contact, then increasingly close so that the bulge is compressed giving increasing contact area. This sequence is illustrated very schematically in FIG. 5. When that occurs, the inflated space is compressed, but as its volume is reduced by less than 10 percent the air pressure increases by less than 10 percent. Therefore the polishing pressure as determined by the air pressure is constant to within 10 percent. When the required contact area is obtained in this way the tool and workpiece are rotated or moved by computer-controlled motors in any way required for polishing (see col. 4, line 29 thru col. 5, line 15 & fig. 2).

Response to Amendment

Applicant's arguments with respect to claims 1,9,10,15,19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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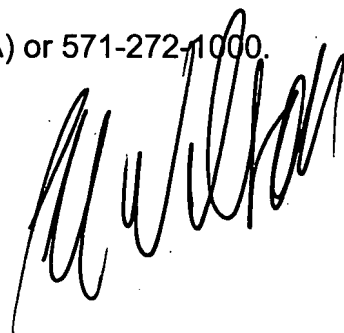
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Ojini whose telephone number is 571 272 4492. The examiner can normally be reached on 7 to 4 Tuesday-Friday with every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571 272 4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AO
8/15/07



LEE D. WILSON
MARY EXAMINER